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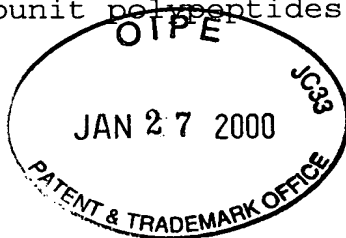
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Gln	Asp	Leu	Tyr	Thr	Val	Glu	Pro	Asn	Asn	Ala	Arg	Gln	Leu	Val	Glu
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Ile	Ala	Ala	Arg	Asp	Ile	Glu	Lys	Leu	Leu	Ser	Asn	Arg	Ser	Lys	Ala
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Trp	Arg	Glu	Asp	Phe	Ala	Ser	Asn	Glu	Val	Val	Tyr	Tyr	Asn	Ala	Lys
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Asp	Asp	Leu	Asp	Pro	Glu	Lys	Asn	Asp	Ser	Glu	Pro	Gly	Ser	Gln	Arg
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Tyr	Gln	His	Ala	Ala	Val	His	Ile	Pro	Thr	Asp	Ile	Tyr	Glu	Gly	Ser
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Thr	Ile	Val	Leu	Asn	Glu	Leu	Asn	Trp	Thr	Ser	Ala	Leu	Asp	Glu	Val
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Phe	Lys	Lys	Asn	Arg	Glu	Glu	Asp	Pro	Ser	Leu	Leu	Trp	Gln	Val	Phe
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Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
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Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
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Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
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Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
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Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
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335

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Glu	Phe	Ile 675	Asp	Arg	Lys	Thr	Pro 680	Asn	Asn	Pro	Ser	Cys 685	Asn	Thr	Asp
Leu	Ile 690	Asn	Arg	Val	Leu	Leu 695	Asp	Ala	Gly	Phe	Thr 700	Asn	Glu	Leu	Val
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Ala 785	Val	Glu	Ile	Tyr	Ile 790	Gln	Gly	Lys	Leu	Leu 795	Lys	Pro	Ala	Val	Val 800
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Ser	Ile	Arg	Asp 820	Pro	Cys	Ala	Gly	Pro 825	Val	Cys	Asp	Cys	Lys 830	Arg	Asn
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Met 850	Ala	Asn	His	Asp	Asp	Tyr 855	Thr	Asn	Gln	Ile	Gly 860	Arg	Phe	Phe	Gly
Glu 865	Ile	Asp	Pro	Ser	Leu 870	Met	Arg	His	Leu	Val 875	Asn	Ile	Ser	Val	Tyr 880
Ala	Phe	Asn	Lys	Ser 885	Tyr	Asp	Tyr	Gln	Ser 890	Val	Cys	Glu	Pro	Gly 895	Ala
Ala	Pro	Lys	Gln 900	Gly	Ala	Gly	His 905	Arg	Ser	Ala	Tyr	Val	Pro 910	Ser	Ile
Ala	Asp	Ile 915	Leu	His	Ile	Gly	Trp 920	Trp	Ala	Thr	Ala	Ala 925	Ala	Trp	Ser

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Ile Leu Gln Gln Phe Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu
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Ala Val Glu Met Glu Asp Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln
945 950 955 960

Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Asp Asn Asp Ser Lys
965 970 975

Ser Phe Ser Gly Val Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
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Val Glu Lys Leu Met Asn Thr Asn Leu Ile Phe Ile Met Val Glu Ser
995 1000 1005

Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Ile Gln Ala Glu Gln
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Thr Ser Asp Gly Pro Asp Pro Cys Asp Met Val Lys Gln Pro Arg Tyr
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Arg Lys Gly Pro Asp Val Cys Phe Asp Asn Asn Ala Leu Glu Asp Tyr
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Lys Thr Ala Ser Gly Val Asn Gln Leu Val Asp Ile Tyr Glu Lys Tyr
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Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
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Trp	Arg	Glu 115	Asp	Phe	Ala	Ser	Asn 120	Glu	Val	Val	Tyr	Tyr 125	Asn	Ala	Lys
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Ile 145	Lys	Pro	Val	Phe	Ile 150	Asp	Asp	Ala	Asn	Phe 155	Gly	Arg	Gln	Ile	Ser 160
Tyr	Gln	His	Ala	Ala 165	Val	His	Ile	Pro	Thr 170	Asp	Ile	Tyr	Glu	Gly 175	Ser
Thr	Ile	Val	Leu 180	Asn	Glu	Leu	Asn 185	Trp	Thr	Ser	Ala	Leu	Asp 190	Glu	Val
Phe	Lys	Lys 195	Asn	Arg	Glu	Glu	Asp 200	Pro	Ser	Leu	Leu	Trp 205	Gln	Val	Phe
Gly	Ser 210	Ala	Thr	Gly	Leu	Ala 215	Arg	Tyr	Tyr	Pro	Ala 220	Ser	Pro	Trp	Val
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Val 450	Tyr	Leu	Asp	Ala	Leu	Glu 455	Leu	Gly	Leu	Val	Ile 460	Thr	Gly	Thr	Leu
Pro 465	Val	Phe	Asn	Ile	Thr 470	Gly	Gln	Asn	Glu	Asn 475	Lys	Thr	Asn	Leu	Lys 480
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Phe 610	Tyr	Tyr	Ile	Lys	Ala	Lys 615	Ile	Glu	Glu	Thr	Ile 620	Thr	Gln	Ala	Arg
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Asp	Leu	Lys	Ile 660	Ser	Asp	Asn	Asn	Thr 665	Glu	Phe	Leu	Leu	Asn 670	Phe	Asn

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Ser	Cys	Ile	Thr	Glu	Gln	Thr	Gln	Tyr	Phe	Phe	Asp	Asn	Asp	Ser	Lys
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Lys Thr Ala Ser Gly Val Asn Gln Leu Val Asp Ile Tyr Glu Lys Tyr
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Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
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Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
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Leu Val Arg Leu Ala Leu Glu Ala Glu Lys Val Gln Ala Ala His Gln
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Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
 115 120 125

Asp Asp Leu Asp Pro Glu Lys Asn Asp Ser Glu Pro Gly Ser Gln Arg
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Ile Lys Pro Val Phe Ile Asp Asp Ala Asn Phe Gly Arg Gln Ile Ser
 145 150 155 160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
 165 170 175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
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Phe Lys Lys Asn Arg Glu Glu Asp Pro Ser Leu Leu Trp Gln Val Phe
 195 200 205

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Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
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Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
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Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
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Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
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Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
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Phe	Thr	Phe	Ser	Val	Gly	Gln	His	Asn	Tyr	Asp	Arg	Gly	Pro	Ile	Gln
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Trp	Met	Ala	Cys	Glu	Asn	Lys	Gly	Tyr	Tyr	Tyr	Glu	Ile	Pro	Ser	Ile
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Pro	Met	Val	Leu	Ala	Gly	Asp	Lys	Ala	Lys	Gln	Val	Gln	Trp	Thr	Asn
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Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Val	Asp	Val	Ser	Leu	Glu	Asp
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Pro	Lys	Asn	Pro	Lys	Ser	Gln	Glu	Pro	Val	Thr	Leu	Asp	Phe	Leu	Asp
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Phe	Val	Val	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Tyr	Pro	Lys	Glu	Ala
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Lys	Arg	Ser	Leu	Asp	Asn	Asp	Asn	Tyr	Val	Phe	Thr	Ala	Pro	Tyr	Phe
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Asn	Lys	Ser	Gly	Pro	Gly	Ala	Tyr	Glu	Ser	Gly	Ile	Met	Val	Ser	Lys
	770					775					780				
Ala	Val	Glu	Ile	Tyr	Ile	Gln	Gly	Lys	Leu	Leu	Lys	Pro	Ala	Val	Val
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Gly Ile Lys Ile Asp Val Asn Ser Trp Ile Glu Asn Phe Thr Lys Thr
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 Ser Ile Arg Asp Pro Cys Ala Gly Pro Val Cys Asp Cys Lys Arg Asn
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 Ser Asp Val Met Asp Cys Val Ile Leu Asp Asp Gly Gly Phe Leu Leu
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 Met Ala Asn His Asp Asp Tyr Thr Asn Gln Ile Gly Arg Phe Phe Gly
 850 855 860
 Glu Ile Asp Pro Ser Leu Met Arg His Leu Val Asn Ile Ser Val Tyr
 865 870 875 880
 Ala Phe Asn Lys Ser Tyr Asp Tyr Gln Ser Val Cys Glu Pro Gly Ala
 885 890 895
 Ala Pro Lys Gln Gly Ala Gly His Arg Ser Ala Tyr Val Pro Ser Ile
 900 905 910
 Ala Asp Ile Leu His Ile Gly Trp Trp Ala Thr Ala Ala Ala Trp Ser
 915 920 925
 Ile Leu Gln Gln Phe Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu
 930 935 940
 Ala Val Glu Met Glu Asp Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln
 945 950 955 960
 Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Asp Asn Asp Ser Lys
 965 970 975
 Ser Phe Ser Gly Val Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
 980 985 990
 Val Glu Lys Leu Met Asn Thr Asn Leu Ile Phe Ile Met Val Glu Ser
 995 1000 1005
 Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Ile Gln Ala Glu Gln
 1010 1015 1020
 Thr Ser Asp Gly Pro Asp Pro Cys Asp Met Val Lys
 1025 1030 1035

<210> 8
 <211> 1063
 <212> PRT
 <213> Sus scrofa

<400> 8
 Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
 1 5 10 15

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Leu	Leu	Ile	Gly	Pro	Ser	Ser	Gln	Glu	Pro	Phe	Pro	Ser	Ala	Val	Thr
			20					25					30		
Ile	Lys	Ser	Trp	Val	Asp	Lys	Met	Gln	Glu	Asp	Leu	Val	Thr	Leu	Ala
		35					40					45			
Lys	Thr	Ala	Ser	Gly	Val	Asn	Gln	Leu	Val	Asp	Ile	Tyr	Glu	Lys	Tyr
	50					55					60				
Gln	Asp	Leu	Tyr	Thr	Val	Glu	Pro	Asn	Asn	Ala	Arg	Gln	Leu	Val	Glu
65					70					75					80
Ile	Ala	Ala	Arg	Asp	Ile	Glu	Lys	Leu	Leu	Ser	Asn	Arg	Ser	Lys	Ala
				85					90					95	
Leu	Val	Arg	Leu	Ala	Leu	Glu	Ala	Glu	Lys	Val	Gln	Ala	Ala	His	Gln
			100					105					110		
Trp	Arg	Glu	Asp	Phe	Ala	Ser	Asn	Glu	Val	Val	Tyr	Tyr	Asn	Ala	Lys
		115					120					125			
Asp	Asp	Leu	Asp	Pro	Glu	Lys	Asn	Asp	Ser	Glu	Pro	Gly	Ser	Gln	Arg
	130					135					140				
Ile	Lys	Pro	Val	Phe	Ile	Asp	Asp	Ala	Asn	Phe	Gly	Arg	Gln	Ile	Ser
145					150					155					160
Tyr	Gln	His	Ala	Ala	Val	His	Ile	Pro	Thr	Asp	Ile	Tyr	Glu	Gly	Ser
				165					170					175	
Thr	Ile	Val	Leu	Asn	Glu	Leu	Asn	Trp	Thr	Ser	Ala	Leu	Asp	Glu	Val
			180					185					190		
Phe	Lys	Lys	Asn	Arg	Glu	Glu	Asp	Pro	Ser	Leu	Leu	Trp	Gln	Val	Phe
		195					200					205			
Gly	Ser	Ala	Thr	Gly	Leu	Ala	Arg	Tyr	Tyr	Pro	Ala	Ser	Pro	Trp	Val
	210					215					220				
Asp	Asn	Ser	Arg	Thr	Pro	Asn	Lys	Ile	Asp	Leu	Tyr	Asp	Val	Arg	Arg
225					230					235				240	
Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
				245					250					255	
Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
			260					265					270		
Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
		275					280					285			
Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
	290					295					300				
Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
305					310					315					320

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Ala	Val	Asn	Asn	Ile	Thr	Ala	Lys	Gly	Ile	Thr	Asp	Tyr	Lys	Lys	Gly
				325					330					335	
Phe	Ser	Phe	Ala	Phe	Glu	Gln	Leu	Leu	Asn	Tyr	Asn	Val	Ser	Arg	Ala
			340					345					350		
Asn	Cys	Asn	Lys	Ile	Ile	Met	Leu	Phe	Thr	Asp	Gly	Gly	Glu	Glu	Arg
		355					360					365			
Ala	Gln	Glu	Ile	Phe	Ala	Lys	Tyr	Asn	Lys	Asp	Lys	Lys	Val	Arg	Val
	370					375					380				
Phe	Thr	Phe	Ser	Val	Gly	Gln	His	Asn	Tyr	Asp	Arg	Gly	Pro	Ile	Gln
385					390					395					400
Trp	Met	Ala	Cys	Glu	Asn	Lys	Gly	Tyr	Tyr	Tyr	Glu	Ile	Pro	Ser	Ile
				405					410					415	
Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu	Tyr	Leu	Asp	Val	Leu	Gly	Arg
			420					425					430		
Pro	Met	Val	Leu	Ala	Gly	Asp	Lys	Ala	Lys	Gln	Val	Gln	Trp	Thr	Asn
		435					440					445			
Val	Tyr	Leu	Asp	Ala	Leu	Glu	Leu	Gly	Leu	Val	Ile	Thr	Gly	Thr	Leu
	450					455					460				
Pro	Val	Phe	Asn	Ile	Thr	Gly	Gln	Asn	Glu	Asn	Lys	Thr	Asn	Leu	Lys
465					470					475					480
Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Val	Asp	Val	Ser	Leu	Glu	Asp
				485					490					495	
Ile	Lys	Arg	Leu	Thr	Pro	Arg	Phe	Thr	Leu	Cys	Pro	Asn	Gly	Tyr	Tyr
			500					505					510		
Phe	Ala	Ile	Asp	Pro	Asn	Gly	Tyr	Val	Leu	Leu	His	Pro	Asn	Leu	Gln
		515					520					525			
Pro	Lys	Asn	Pro	Lys	Ser	Gln	Glu	Pro	Val	Thr	Leu	Asp	Phe	Leu	Asp
	530					535					540				
Ala	Glu	Leu	Glu	Asn	Asp	Ile	Lys	Val	Glu	Ile	Arg	Asn	Lys	Met	Ile
545					550					555					560
Asp	Gly	Glu	Ser	Gly	Glu	Lys	Thr	Phe	Arg	Thr	Leu	Val	Lys	Ser	Gln
				565					570					575	
Asp	Glu	Arg	Tyr	Ile	Asp	Lys	Gly	Asn	Arg	Thr	Tyr	Thr	Trp	Thr	Pro
			580					585					590		
Val	Asn	Gly	Thr	Asp	Tyr	Ser	Leu	Ala	Leu	Val	Leu	Pro	Thr	Tyr	Ser
		595					600					605			
Phe	Tyr	Tyr	Ile	Lys	Ala	Lys	Ile	Glu	Glu	Thr	Ile	Thr	Gln	Ala	Arg

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610					615					620					
Ser 625	Lys	Lys	Gly	Lys	Met 630	Lys	Asp	Ser	Glu	Thr 635	Leu	Lys	Pro	Asp	Asn 640
Phe	Glu	Glu	Ser	Gly 645	Tyr	Thr	Phe	Ile	Ala 650	Pro	Arg	Asp	Tyr	Cys 655	Asn
Asp	Leu	Lys	Ile 660	Ser	Asp	Asn	Asn	Thr 665	Glu	Phe	Leu	Leu	Asn 670	Phe	Asn
Glu	Phe	Ile 675	Asp	Arg	Lys	Thr	Pro 680	Asn	Asn	Pro	Ser	Cys 685	Asn	Thr	Asp
Leu	Ile 690	Asn	Arg	Val	Leu	Leu 695	Asp	Ala	Gly	Phe	Thr 700	Asn	Glu	Leu	Val
Gln 705	Asn	Tyr	Trp	Ser	Lys 710	Gln	Lys	Asn	Ile	Lys 715	Gly	Val	Lys	Ala	Arg 720
Phe	Val	Val	Thr	Asp 725	Gly	Gly	Ile	Thr	Arg 730	Val	Tyr	Pro	Lys	Glu 735	Ala
Gly	Glu	Asn	Trp 740	Gln	Glu	Asn	Pro	Glu 745	Thr	Tyr	Glu	Asp	Ser 750	Phe	Tyr
Lys	Arg	Ser 755	Leu	Asp	Asn	Asp	Asn 760	Tyr	Val	Phe	Thr	Ala 765	Pro	Tyr	Phe
Asn 770	Lys	Ser	Gly	Pro	Gly	Ala 775	Tyr	Glu	Ser	Gly	Ile 780	Met	Val	Ser	Lys
Ala 785	Val	Glu	Ile	Tyr	Ile 790	Gln	Gly	Lys	Leu	Leu 795	Lys	Pro	Ala	Val	Val 800
Gly	Ile	Lys	Ile	Asp 805	Val	Asn	Ser	Trp 810	Ile	Glu	Asn	Phe	Thr	Lys 815	Thr
Ser	Ile	Arg	Asp 820	Pro	Cys	Ala	Gly	Pro 825	Val	Cys	Asp	Cys	Lys 830	Arg	Asn
Ser	Asp	Val 835	Met	Asp	Cys	Val	Ile 840	Leu	Asp	Asp	Gly	Gly 845	Phe	Leu	Leu
Met 850	Ala	Asn	His	Asp	Asp	Tyr 855	Thr	Asn	Gln	Ile	Gly 860	Arg	Phe	Phe	Gly
Glu 865	Ile	Asp	Pro	Ser	Leu 870	Met	Arg	His	Leu	Val 875	Asn	Ile	Ser	Val	Tyr 880
Ala	Phe	Asn	Lys	Ser 885	Tyr	Asp	Tyr	Gln	Ser 890	Val	Cys	Glu	Pro	Gly 895	Ala
Ala	Pro	Lys	Gln 900	Gly	Ala	Gly	His	Arg 905	Ser	Ala	Tyr	Val	Pro 910	Ser	Ile

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Ala Asp Ile Leu His Ile Gly Trp Trp Ala Thr Ala Ala Ala Trp Ser
 915 920 925

Ile Leu Gln Gln Phe Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu
 930 935 940

Ala Val Glu Met Glu Asp Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln
 945 950 955 960

Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Asp Asn Asp Ser Lys
 965 970 975

Ser Phe Ser Gly Val Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
 980 985 990

Val Glu Lys Leu Met Asn Thr Asn Leu Ile Phe Ile Met Val Glu Ser
 995 1000 1005

Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Ile Gln Ala Glu Gln
 1010 1015 1020

Thr Ser Asp Gly Pro Asp Pro Cys Asp Met Val Lys Gln Pro Arg Tyr
 1025 1030 1035 1040

Arg Lys Gly Pro Asp Val Cys Phe Asp Asn Asn Ala Leu Glu Asp Tyr
 1045 1050 1055

Thr Asp Cys Gly Gly Val Ser
 1060

<210> 9
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:primer

<400> 9
 ggggattgat cttcgatcgc g
 21

<210> 10
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:primer

<400> 10
 ctgagatttg gggttctttg g
 21

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<210> 11
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:peptide

<400> 11
Val Glu Met Glu Asp Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln Ser
1 5 10 15

Cys

<210> 12
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

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21

<210> 13
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 13
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21

<210> 14
<211> 1091
<212> PRT
<213> Homo sapiens

<400> 14
Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
1 5 10 15

Leu Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Ala Val Thr
20 25 30

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Ile	Lys	Ser	Trp	Val	Asp	Lys	Met	Gln	Glu	Asp	Leu	Val	Thr	Leu	Ala
		35					40					45			
Lys	Thr	Ala	Ser	Gly	Val	Asn	Gln	Leu	Val	Asp	Ile	Tyr	Glu	Lys	Tyr
	50					55					60				
Gln	Asp	Leu	Tyr	Thr	Val	Glu	Pro	Asn	Asn	Ala	Arg	Gln	Leu	Val	Glu
65					70					75					80
Ile	Ala	Ala	Arg	Asp	Ile	Glu	Lys	Leu	Leu	Ser	Asn	Arg	Ser	Lys	Ala
				85					90					95	
Leu	Val	Ser	Leu	Ala	Leu	Glu	Ala	Glu	Lys	Val	Gln	Ala	Ala	His	Gln
			100					105					110		
Trp	Arg	Glu	Asp	Phe	Ala	Ser	Asn	Glu	Val	Val	Tyr	Tyr	Asn	Ala	Lys
		115					120					125			
Asp	Asp	Leu	Asp	Pro	Glu	Lys	Asn	Asp	Ser	Glu	Pro	Gly	Ser	Gln	Arg
	130					135					140				
Ile	Lys	Pro	Val	Phe	Ile	Glu	Asp	Ala	Asn	Phe	Gly	Arg	Gln	Ile	Ser
145					150					155					160
Tyr	Gln	His	Ala	Ala	Val	His	Ile	Pro	Thr	Asp	Ile	Tyr	Glu	Gly	Ser
				165					170					175	
Thr	Ile	Val	Leu	Asn	Glu	Leu	Asn	Trp	Thr	Ser	Ala	Leu	Asp	Glu	Val
			180					185					190		
Phe	Lys	Lys	Asn	Arg	Glu	Glu	Asp	Pro	Ser	Leu	Leu	Trp	Gln	Val	Phe
		195					200					205			
Gly	Ser	Ala	Thr	Gly	Leu	Ala	Arg	Tyr	Tyr	Pro	Ala	Ser	Pro	Trp	Val
	210					215					220				
Asp	Asn	Ser	Arg	Thr	Pro	Asn	Lys	Ile	Asp	Leu	Tyr	Asp	Val	Arg	Arg
225					230					235				240	
Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
				245					250					255	
Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
			260					265					270		
Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
		275					280					285			
Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
	290					295					300				
Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
305					310					315					320
Ala	Val	Asn	Asn	Ile	Thr	Ala	Lys	Gly	Ile	Thr	Asp	Tyr	Lys	Lys	Gly

335

Phe	Ser	Phe	Ala	Phe	Glu	Gln	Leu	Leu	Asn	Tyr	Asn	Val	Ser	Arg	Ala
			340					345					350		
Asn	Cys	Asn	Lys	Ile	Ile	Met	Leu	Phe	Thr	Asp	Gly	Gly	Glu	Glu	Arg
		355					360					365			
Ala	Gln	Glu	Ile	Phe	Asn	Lys	Tyr	Asn	Lys	Asp	Lys	Lys	Val	Arg	Val
	370					375					380				
Phe	Arg	Phe	Ser	Val	Gly	Gln	His	Asn	Tyr	Glu	Arg	Gly	Pro	Ile	Gln
385					390					395					400
Trp	Met	Ala	Cys	Glu	Asn	Lys	Gly	Tyr	Tyr	Tyr	Glu	Ile	Pro	Ser	Ile
				405					410					415	
Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu	Tyr	Leu	Asp	Val	Leu	Gly	Arg
			420					425					430		
Pro	Met	Val	Leu	Ala	Gly	Asp	Lys	Ala	Lys	Gln	Val	Gln	Trp	Thr	Asn
		435					440					445			
Val	Tyr	Leu	Asp	Ala	Leu	Glu	Leu	Gly	Leu	Val	Ile	Thr	Gly	Thr	Leu
	450					455					460				
Pro	Val	Phe	Asn	Ile	Thr	Gly	Gln	Phe	Glu	Asn	Lys	Thr	Asn	Leu	Lys
465					470					475					480
Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Val	Asp	Val	Ser	Leu	Glu	Asp
				485					490					495	
Ile	Lys	Arg	Leu	Thr	Pro	Arg	Phe	Thr	Leu	Cys	Pro	Asn	Gly	Tyr	Tyr
			500					505					510		
Phe	Ala	Ile	Asp	Pro	Asn	Gly	Tyr	Val	Leu	Leu	His	Pro	Asn	Leu	Gln
		515					520					525			
Pro	Lys	Asn	Pro	Lys	Ser	Gln	Glu	Pro	Val	Thr	Leu	Asp	Phe	Leu	Asp
	530					535					540				
Ala	Glu	Leu	Glu	Asn	Asp	Ile	Lys	Val	Glu	Ile	Arg	Asn	Lys	Met	Ile
545					550					555					560
Asp	Gly	Glu	Ser	Gly	Glu	Lys	Thr	Phe	Arg	Thr	Leu	Val	Lys	Ser	Gln
				565					570					575	
Asp	Glu	Arg	Tyr	Ile	Asp	Lys	Gly	Asn	Arg	Thr	Tyr	Thr	Trp	Thr	Pro
			580					585					590		
Val	Asn	Gly	Thr	Asp	Tyr	Ser	Leu	Ala	Leu	Val	Leu	Pro	Thr	Tyr	Ser
		595					600					605			
Phe	Tyr	Tyr	Ile	Lys	Ala	Lys	Leu	Glu	Glu	Thr	Ile	Thr	Gln	Ala	Arg
	610					615					620				

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Ser 625	Lys	Lys	Gly	Lys	Met 630	Lys	Asp	Ser	Glu	Thr 635	Leu	Lys	Pro	Asp	Asn 640
Phe	Glu	Glu	Ser	Gly 645	Tyr	Thr	Phe	Ile	Ala 650	Pro	Arg	Asp	Tyr	Cys 655	Asn
Asp	Leu	Lys	Ile 660	Ser	Asp	Asn	Asn	Thr 665	Glu	Phe	Leu	Leu	Asn 670	Phe	Asn
Glu	Phe	Ile 675	Asp	Arg	Lys	Thr	Pro 680	Asn	Asn	Pro	Ser	Cys 685	Asn	Ala	Asp
Leu	Ile 690	Asn	Arg	Val	Leu	Leu 695	Asp	Ala	Gly	Phe	Thr 700	Asn	Glu	Leu	Val
Gln 705	Asn	Tyr	Trp	Ser	Lys 710	Gln	Lys	Asn	Ile	Lys 715	Gly	Val	Lys	Ala	Arg 720
Phe	Val	Val	Thr	Asp 725	Gly	Gly	Ile	Thr	Arg 730	Val	Tyr	Pro	Lys	Glu 735	Ala
Gly	Glu	Asn	Trp 740	Gln	Glu	Asn	Pro	Glu 745	Thr	Tyr	Glu	Asp	Ser 750	Phe	Tyr
Lys	Arg	Ser 755	Leu	Asp	Asn	Asp	Asn 760	Tyr	Val	Phe	Thr	Ala 765	Pro	Tyr	Phe
Asn 770	Lys	Ser	Gly	Pro	Gly	Ala 775	Tyr	Glu	Ser	Gly	Ile 780	Met	Val	Ser	Lys
Ala 785	Val	Glu	Ile	Tyr	Ile 790	Gln	Gly	Lys	Leu	Leu 795	Lys	Pro	Ala	Val	Val 800
Gly	Ile	Lys	Ile	Asp 805	Val	Asn	Ser	Trp	Ile 810	Glu	Asn	Phe	Thr	Lys 815	Thr
Ser	Ile	Arg	Asp 820	Pro	Cys	Ala	Gly	Pro 825	Val	Cys	Asp	Cys	Lys 830	Arg	Asn
Ser	Asp	Val 835	Met	Asp	Cys	Val	Ile 840	Leu	Asp	Asp	Gly	Gly 845	Phe	Leu	Leu
Met 850	Ala	Asn	His	Asp	Asp	Tyr 855	Thr	Asn	Gln	Ile	Gly 860	Arg	Phe	Phe	Gly
Glu 865	Ile	Asp	Pro	Ser	Leu	Met 870	Arg	His	Leu	Val 875	Asn	Ile	Ser	Val	Tyr 880
Ala	Phe	Asn	Lys	Ser 885	Tyr	Asp	Tyr	Gln	Ser 890	Val	Cys	Glu	Pro	Gly 895	Ala
Ala	Pro	Lys	Gln 900	Gly	Ala	Gly	His 905	Arg	Ser	Ala	Tyr	Val	Pro 910	Ser	Val
Ala	Asp	Ile 915	Leu	Gln	Ile	Gly	Trp 920	Trp	Ala	Thr	Ala	Ala 925	Ala	Trp	Ser

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Ile Leu Gln Gln Phe Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu
930 935 940

Ala Val Glu Met Glu Asp Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln
945 950 955 960

Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Asp Asn Asp Ser Lys
965 970 975

Ser Phe Ser Gly Val Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
980 985 990

Gly Glu Lys Leu Met Asn Thr Asn Leu Ile Phe Ile Met Val Glu Ser
995 1000 1005

Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Ile Gln Ala Glu Gln
1010 1015 1020

Thr Ser Asp Gly Pro Asn Pro Cys Asp Met Val Lys Gln Pro Arg Tyr
1025 1030 1035 1040

Arg Lys Gly Pro Asp Val Cys Phe Asp Asn Asn Val Leu Glu Asp Tyr
1045 1050 1055

Thr Asp Cys Gly Gly Val Ser Gly Leu Asn Pro Ser Leu Trp Tyr Ile
1060 1065 1070

Ile Gly Ile Gln Phe Leu Leu Leu Trp Leu Val Ser Gly Ser Thr His
1075 1080 1085

Arg Leu Leu
1090

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<400> 15
Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
1 5 10 15

Leu Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Ala Val Thr
20 25 30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
35 40 45

Lys Thr Ala Ser Gly Val Asn Gln Leu Val Asp Ile Tyr Glu Lys Tyr
50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
65 70 75 80

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Ile	Ala	Ala	Arg	Asp	Ile	Glu	Lys	Leu	Leu	Ser	Asn	Arg	Ser	Lys	Ala
				85					90					95	
Leu	Val	Ser	Leu	Ala	Leu	Glu	Ala	Glu	Lys	Val	Gln	Ala	Ala	His	Gln
			100					105					110		
Trp	Arg	Glu	Asp	Phe	Ala	Ser	Asn	Glu	Val	Val	Tyr	Tyr	Asn	Ala	Lys
		115					120					125			
Asp	Asp	Leu	Asp	Pro	Glu	Lys	Asn	Asp	Ser	Glu	Pro	Gly	Ser	Gln	Arg
	130					135					140				
Ile	Lys	Pro	Val	Phe	Ile	Glu	Asp	Ala	Asn	Phe	Gly	Arg	Gln	Ile	Ser
145					150					155					160
Tyr	Gln	His	Ala	Ala	Val	His	Ile	Pro	Thr	Asp	Ile	Tyr	Glu	Gly	Ser
				165					170					175	
Thr	Ile	Val	Leu	Asn	Glu	Leu	Asn	Trp	Thr	Ser	Ala	Leu	Asp	Glu	Val
			180					185					190		
Phe	Lys	Lys	Asn	Arg	Glu	Glu	Asp	Pro	Ser	Leu	Leu	Trp	Gln	Val	Phe
		195					200					205			
Gly	Ser	Ala	Thr	Gly	Leu	Ala	Arg	Tyr	Tyr	Pro	Ala	Ser	Pro	Trp	Val
	210					215					220				
Asp	Asn	Ser	Arg	Thr	Pro	Asn	Lys	Ile	Asp	Leu	Tyr	Asp	Val	Arg	Arg
225					230					235					240
Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
				245					250					255	
Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
			260					265					270		
Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
		275					280					285			
Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
	290					295					300				
Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
305					310					315					320
Ala	Val	Asn	Asn	Ile	Thr	Ala	Lys	Gly	Ile	Thr	Asp	Tyr	Lys	Lys	Gly
				325					330					335	
Phe	Ser	Phe	Ala	Phe	Glu	Gln	Leu	Leu	Asn	Tyr	Asn	Val	Ser	Arg	Ala
			340					345					350		
Asn	Cys	Asn	Lys	Ile	Ile	Met	Leu	Phe	Thr	Asp	Gly	Gly	Glu	Glu	Arg
		355					360					365			
Ala	Gln	Glu	Ile	Phe	Asn	Lys	Tyr	Asn	Lys	Asp	Lys	Lys	Val	Arg	Val

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370					375					380					
Phe 385	Arg	Phe	Ser	Val	Gly 390	Gln	His	Asn	Tyr	Glu 395	Arg	Gly	Pro	Ile	Gln 400
Trp	Met	Ala	Cys	Glu 405	Asn	Lys	Gly	Tyr	Tyr 410	Tyr	Glu	Ile	Pro	Ser	Ile 415
Gly	Ala	Ile	Arg 420	Ile	Asn	Thr	Gln	Glu 425	Tyr	Leu	Asp	Val	Leu 430	Gly	Arg
Pro	Met	Val 435	Leu	Ala	Gly	Asp	Lys 440	Ala	Lys	Gln	Val	Gln 445	Trp	Thr	Asn
Val 450	Tyr	Leu	Asp	Ala	Leu	Glu 455	Leu	Gly	Leu	Val	Ile 460	Thr	Gly	Thr	Leu
Pro 465	Val	Phe	Asn	Ile	Thr 470	Gly	Gln	Phe	Glu	Asn 475	Lys	Thr	Asn	Leu	Lys 480
Asn	Gln	Leu	Ile	Leu 485	Gly	Val	Met	Gly	Val 490	Asp	Val	Ser	Leu	Glu 495	Asp
Ile	Lys	Arg	Leu 500	Thr	Pro	Arg	Phe	Thr 505	Leu	Cys	Pro	Asn	Gly 510	Tyr	Tyr
Phe	Ala	Ile 515	Asp	Pro	Asn	Gly	Tyr 520	Val	Leu	Leu	His	Pro 525	Asn	Leu	Gln
Pro	Lys 530	Asn	Pro	Lys	Ser	Gln 535	Glu	Pro	Val	Thr	Leu 540	Asp	Phe	Leu	Asp
Ala 545	Glu	Leu	Glu	Asn	Asp 550	Ile	Lys	Val	Glu	Ile 555	Arg	Asn	Lys	Met	Ile 560
Asp	Gly	Glu	Ser	Gly 565	Glu	Lys	Thr	Phe	Arg 570	Thr	Leu	Val	Lys	Ser 575	Gln
Asp	Glu	Arg	Tyr 580	Ile	Asp	Lys	Gly	Asn 585	Arg	Thr	Tyr	Thr	Trp 590	Thr	Pro
Val	Asn 595	Gly	Thr	Asp	Tyr	Ser	Leu 600	Ala	Leu	Val	Leu 605	Pro	Thr	Tyr	Ser
Phe 610	Tyr	Tyr	Ile	Lys	Ala	Lys 615	Leu	Glu	Glu	Thr	Ile 620	Thr	Gln	Ala	Arg
Ser 625	Lys	Lys	Gly	Lys	Met 630	Lys	Asp	Ser	Glu	Thr 635	Leu	Lys	Pro	Asp	Asn 640
Phe	Glu	Glu	Ser	Gly 645	Tyr	Thr	Phe	Ile	Ala 650	Pro	Arg	Asp	Tyr	Cys 655	Asn
Asp	Leu	Lys	Ile 660	Ser	Asp	Asn	Asn	Thr 665	Glu	Phe	Leu	Leu	Asn 670	Phe	Asn

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Glu	Phe	Ile	Asp	Arg	Lys	Thr	Pro	Asn	Asn	Pro	Ser	Cys	Asn	Ala	Asp
		675					680					685			
Leu	Ile	Asn	Arg	Val	Leu	Leu	Asp	Ala	Gly	Phe	Thr	Asn	Glu	Leu	Val
	690					695					700				
Gln	Asn	Tyr	Trp	Ser	Lys	Gln	Lys	Asn	Ile	Lys	Gly	Val	Lys	Ala	Arg
705					710					715					720
Phe	Val	Val	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Tyr	Pro	Lys	Glu	Ala
				725					730					735	
Gly	Glu	Asn	Trp	Gln	Glu	Asn	Pro	Glu	Thr	Tyr	Glu	Asp	Ser	Phe	Tyr
			740					745					750		
Lys	Arg	Ser	Leu	Asp	Asn	Asp	Asn	Tyr	Val	Phe	Thr	Ala	Pro	Tyr	Phe
		755					760					765			
Asn	Lys	Ser	Gly	Pro	Gly	Ala	Tyr	Glu	Ser	Gly	Ile	Met	Val	Ser	Lys
	770					775					780				
Ala	Val	Glu	Ile	Tyr	Ile	Gln	Gly	Lys	Leu	Leu	Lys	Pro	Ala	Val	Val
785					790					795					800
Gly	Ile	Lys	Ile	Asp	Val	Asn	Ser	Trp	Ile	Glu	Asn	Phe	Thr	Lys	Thr
				805					810					815	
Ser	Ile	Arg	Asp	Pro	Cys	Ala	Gly	Pro	Val	Cys	Asp	Cys	Lys	Arg	Asn
			820					825					830		
Ser	Asp	Val	Met	Asp	Cys	Val	Ile	Leu	Asp	Asp	Gly	Gly	Phe	Leu	Leu
		835					840					845			
Met	Ala	Asn	His	Asp	Asp	Tyr	Thr	Asn	Gln	Ile	Gly	Arg	Phe	Phe	Gly
	850					855					860				
Glu	Ile	Asp	Pro	Ser	Leu	Met	Arg	His	Leu	Val	Asn	Ile	Ser	Val	Tyr
865					870					875					880
Ala	Phe	Asn	Lys	Ser	Tyr	Asp	Tyr	Gln	Ser	Val	Cys	Glu	Pro	Gly	Ala
				885					890					895	
Ala	Pro	Lys	Gln	Gly	Ala	Gly	His	Arg	Ser	Ala	Tyr	Val	Pro	Ser	Val
			900					905					910		
Ala	Asp	Ile	Leu	Gln	Ile	Gly	Trp	Trp	Ala	Thr	Ala	Ala	Ala	Trp	Ser
		915					920					925			
Ile	Leu	Gln	Gln	Phe	Leu	Leu	Ser	Leu	Thr	Phe	Pro	Arg	Leu	Leu	Glu
	930					935					940				
Ala	Val	Glu	Met	Glu	Asp	Asp	Asp	Phe	Thr	Ala	Ser	Leu	Ser	Lys	Gln
945					950					955					960
Ser	Cys	Ile	Thr	Glu	Gln	Thr	Gln	Tyr	Phe	Phe	Asp	Asn	Asp	Ser	Lys
				965					970					975	

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Ser Phe Ser Gly Val Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
 980 985 990

Gly Glu Lys Leu Met Asn Thr Asn Leu Ile Phe Ile Met Val Glu Ser
 995 1000 1005

Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu
 1010 1015

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 <213> Homo sapiens

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Leu Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Ala Val Thr
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Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
 35 40 45

Lys Thr Ala Ser Gly Val Asn Gln Leu Val Asp Ile Tyr Glu Lys Tyr
 50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
 65 70 75 80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
 85 90 95

Leu Val Ser Leu Ala Leu Glu Ala Glu Lys Val Gln Ala Ala His Gln
 100 105 110

Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
 115 120 125

Asp Asp Leu Asp Pro Glu Lys Asn Asp Ser Glu Pro Gly Ser Gln Arg
 130 135 140

Ile Lys Pro Val Phe Ile Glu Asp Ala Asn Phe Gly Arg Gln Ile Ser
 145 150 155 160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
 165 170 175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
 180 185 190

Phe Lys Lys Asn Arg Glu Glu Asp Pro Ser Leu Leu Trp Gln Val Phe
 195 200 205

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Gly	Ser	Ala	Thr	Gly	Leu	Ala	Arg	Tyr	Tyr	Pro	Ala	Ser	Pro	Trp	Val
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Asp	Asn	Ser	Arg	Thr	Pro	Asn	Lys	Ile	Asp	Leu	Tyr	Asp	Val	Arg	Arg
225					230					235					240
Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
				245					250					255	
Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
			260					265					270		
Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
		275					280					285			
Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
	290					295					300				
Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
305					310					315					320
Ala	Val	Asn	Asn	Ile	Thr	Ala	Lys	Gly	Ile	Thr	Asp	Tyr	Lys	Lys	Gly
				325					330					335	
Phe	Ser	Phe	Ala	Phe	Glu	Gln	Leu	Leu	Asn	Tyr	Asn	Val	Ser	Arg	Ala
			340					345					350		
Asn	Cys	Asn	Lys	Ile	Ile	Met	Leu	Phe	Thr	Asp	Gly	Gly	Glu	Glu	Arg
		355					360					365			
Ala	Gln	Glu	Ile	Phe	Asn	Lys	Tyr	Asn	Lys	Asp	Lys	Lys	Val	Arg	Val
	370					375					380				
Phe	Arg	Phe	Ser	Val	Gly	Gln	His	Asn	Tyr	Glu	Arg	Gly	Pro	Ile	Gln
385					390					395					400
Trp	Met	Ala	Cys	Glu	Asn	Lys	Gly	Tyr	Tyr	Tyr	Glu	Ile	Pro	Ser	Ile
				405					410					415	
Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu	Tyr	Leu	Asp	Val	Leu	Gly	Arg
			420					425					430		
Pro	Met	Val	Leu	Ala	Gly	Asp	Lys	Ala	Lys	Gln	Val	Gln	Trp	Thr	Asn
		435					440					445			
Val	Tyr	Leu	Asp	Ala	Leu	Glu	Leu	Gly	Leu	Val	Ile	Thr	Gly	Thr	Leu
	450					455					460				
Pro	Val	Phe	Asn	Ile	Thr	Gly	Gln	Phe	Glu	Asn	Lys	Thr	Asn	Leu	Lys
465					470					475					480
Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Val	Asp	Val	Ser	Leu	Glu	Asp
				485					490					495	
Ile	Lys	Arg	Leu	Thr	Pro	Arg	Phe	Thr	Leu	Cys	Pro	Asn	Gly	Tyr	Tyr

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500					505					510					
Phe	Ala	Ile	Asp	Pro	Asn	Gly	Tyr	Val	Leu	Leu	His	Pro	Asn	Leu	Gln
		515					520					525			
Pro	Lys	Asn	Pro	Lys	Ser	Gln	Glu	Pro	Val	Thr	Leu	Asp	Phe	Leu	Asp
	530					535					540				
Ala	Glu	Leu	Glu	Asn	Asp	Ile	Lys	Val	Glu	Ile	Arg	Asn	Lys	Met	Ile
545					550					555					560
Asp	Gly	Glu	Ser	Gly	Glu	Lys	Thr	Phe	Arg	Thr	Leu	Val	Lys	Ser	Gln
				565					570					575	
Asp	Glu	Arg	Tyr	Ile	Asp	Lys	Gly	Asn	Arg	Thr	Tyr	Thr	Trp	Thr	Pro
			580					585					590		
Val	Asn	Gly	Thr	Asp	Tyr	Ser	Leu	Ala	Leu	Val	Leu	Pro	Thr	Tyr	Ser
		595					600					605			
Phe	Tyr	Tyr	Ile	Lys	Ala	Lys	Leu	Glu	Glu	Thr	Ile	Thr	Gln	Ala	Arg
	610					615					620				
Ser	Lys	Lys	Gly	Lys	Met	Lys	Asp	Ser	Glu	Thr	Leu	Lys	Pro	Asp	Asn
625					630					635					640
Phe	Glu	Glu	Ser	Gly	Tyr	Thr	Phe	Ile	Ala	Pro	Arg	Asp	Tyr	Cys	Asn
				645					650					655	
Asp	Leu	Lys	Ile	Ser	Asp	Asn	Asn	Thr	Glu	Phe	Leu	Leu	Asn	Phe	Asn
			660					665					670		
Glu	Phe	Ile	Asp	Arg	Lys	Thr	Pro	Asn	Asn	Pro	Ser	Cys	Asn	Ala	Asp
		675					680					685			
Leu	Ile	Asn	Arg	Val	Leu	Leu	Asp	Ala	Gly	Phe	Thr	Asn	Glu	Leu	Val
	690					695					700				
Gln	Asn	Tyr	Trp	Ser	Lys	Gln	Lys	Asn	Ile	Lys	Gly	Val	Lys	Ala	Arg
705					710					715					720
Phe	Val	Val	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Tyr	Pro	Lys	Glu	Ala
				725					730					735	
Gly	Glu	Asn	Trp	Gln	Glu	Asn	Pro	Glu	Thr	Tyr	Glu	Asp	Ser	Phe	Tyr
			740					745					750		
Lys	Arg	Ser	Leu	Asp	Asn	Asp	Asn	Tyr	Val	Phe	Thr	Ala	Pro	Tyr	Phe
		755					760					765			
Asn	Lys	Ser	Gly	Pro	Gly	Ala	Tyr	Glu	Ser	Gly	Ile	Met	Val	Ser	Lys
	770					775					780				
Ala	Val	Glu	Ile	Tyr	Ile	Gln	Gly	Lys	Leu	Leu	Lys	Pro	Ala	Val	Val
785					790					795					800

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Gly	Ile	Lys	Ile	Asp	Val	Asn	Ser	Trp	Ile	Glu	Asn	Phe	Thr	Lys	Thr
				805					810					815	
Ser	Ile	Arg	Asp	Pro	Cys	Ala	Gly	Pro	Val	Cys	Asp	Cys	Lys	Arg	Asn
			820					825					830		
Ser	Asp	Val	Met	Asp	Cys	Val	Ile	Leu	Asp	Asp	Gly	Gly	Phe	Leu	Leu
		835					840					845			
Met	Ala	Asn	His	Asp	Asp	Tyr	Thr	Asn	Gln	Ile	Gly	Arg	Phe	Phe	Gly
	850					855					860				
Glu	Ile	Asp	Pro	Ser	Leu	Met	Arg	His	Leu	Val	Asn	Ile	Ser	Val	Tyr
865					870					875					880
Ala	Phe	Asn	Lys	Ser	Tyr	Asp	Tyr	Gln	Ser	Val	Cys	Glu	Pro	Gly	Ala
				885					890					895	
Ala	Pro	Lys	Gln	Gly	Ala	Gly	His	Arg	Ser	Ala	Tyr	Val	Pro	Ser	Val
			900					905					910		
Ala	Asp	Ile	Leu	Gln	Ile	Gly	Trp	Trp	Ala	Thr	Ala	Ala	Ala	Trp	Ser
		915					920					925			
Ile	Leu	Gln	Gln	Phe	Leu	Leu	Ser	Leu	Thr	Phe	Pro	Arg	Leu	Leu	Glu
	930					935					940				
Ala	Val	Glu	Met	Glu	Asp	Asp	Asp	Phe	Thr	Ala	Ser	Leu	Ser	Lys	Gln
945					950					955					960
Ser	Cys	Ile	Thr	Glu	Gln	Thr	Gln	Tyr	Phe	Phe	Asp	Asn	Asp	Ser	Lys
				965					970					975	
Ser	Phe	Ser	Gly	Val	Leu	Asp	Cys	Gly	Asn	Cys	Ser	Arg	Ile	Phe	His
			980					985					990		
Gly	Glu	Lys	Leu	Met	Asn	Thr	Asn	Leu	Ile	Phe	Ile	Met	Val	Glu	Ser
		995					1000					1005			
Lys	Gly	Thr	Cys	Pro	Cys	Asp	Thr	Arg	Leu	Leu	Ile	Gln	Ala	Glu	Gln
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Ile	Lys	Ser	Trp	Val	Asp	Lys	Met	Gln	Glu	Asp	Leu	Val	Thr	Leu	Ala
		35					40					45			
Lys	Thr	Ala	Ser	Gly	Val	Asn	Gln	Leu	Val	Asp	Ile	Tyr	Glu	Lys	Tyr
	50					55					60				
Gln	Asp	Leu	Tyr	Thr	Val	Glu	Pro	Asn	Asn	Ala	Arg	Gln	Leu	Val	Glu
65					70					75					80
Ile	Ala	Ala	Arg	Asp	Ile	Glu	Lys	Leu	Leu	Ser	Asn	Arg	Ser	Lys	Ala
				85					90					95	
Leu	Val	Ser	Leu	Ala	Leu	Glu	Ala	Glu	Lys	Val	Gln	Ala	Ala	His	Gln
			100					105					110		
Trp	Arg	Glu	Asp	Phe	Ala	Ser	Asn	Glu	Val	Val	Tyr	Tyr	Asn	Ala	Lys
		115					120					125			
Asp	Asp	Leu	Asp	Pro	Glu	Lys	Asn	Asp	Ser	Glu	Pro	Gly	Ser	Gln	Arg
	130					135					140				
Ile	Lys	Pro	Val	Phe	Ile	Glu	Asp	Ala	Asn	Phe	Gly	Arg	Gln	Ile	Ser
145					150					155					160
Tyr	Gln	His	Ala	Ala	Val	His	Ile	Pro	Thr	Asp	Ile	Tyr	Glu	Gly	Ser
				165					170					175	
Thr	Ile	Val	Leu	Asn	Glu	Leu	Asn	Trp	Thr	Ser	Ala	Leu	Asp	Glu	Val
			180					185					190		
Phe	Lys	Lys	Asn	Arg	Glu	Glu	Asp	Pro	Ser	Leu	Leu	Trp	Gln	Val	Phe
		195					200					205			
Gly	Ser	Ala	Thr	Gly	Leu	Ala	Arg	Tyr	Tyr	Pro	Ala	Ser	Pro	Trp	Val
	210					215					220				
Asp	Asn	Ser	Arg	Thr	Pro	Asn	Lys	Ile	Asp	Leu	Tyr	Asp	Val	Arg	Arg
225					230					235				240	
Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ala	Ser	Pro	Lys	Asp	Met	Leu	Ile
				245					250					255	
Leu	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly	Leu	Thr	Leu	Lys	Leu	Ile
			260					265					270		
Arg	Thr	Ser	Val	Ser	Glu	Met	Leu	Glu	Thr	Leu	Ser	Asp	Asp	Asp	Phe
		275					280					285			
Val	Asn	Val	Ala	Ser	Phe	Asn	Ser	Asn	Ala	Gln	Asp	Val	Ser	Cys	Phe
	290					295					300				
Gln	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn	Lys	Lys	Val	Leu	Lys	Asp
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Ala	Val	Asn	Asn	Ile	Thr	Ala	Lys	Gly	Ile	Thr	Asp	Tyr	Lys	Lys	Gly
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Phe	Ser	Phe	Ala	Phe	Glu	Gln	Leu	Leu	Asn	Tyr	Asn	Val	Ser	Arg	Ala
			340					345					350		
Asn	Cys	Asn	Lys	Ile	Ile	Met	Leu	Phe	Thr	Asp	Gly	Gly	Glu	Glu	Arg
		355					360					365			
Ala	Gln	Glu	Ile	Phe	Asn	Lys	Tyr	Asn	Lys	Asp	Lys	Lys	Val	Arg	Val
	370					375					380				
Phe	Arg	Phe	Ser	Val	Gly	Gln	His	Asn	Tyr	Glu	Arg	Gly	Pro	Ile	Gln
385					390					395					400
Trp	Met	Ala	Cys	Glu	Asn	Lys	Gly	Tyr	Tyr	Tyr	Glu	Ile	Pro	Ser	Ile
				405					410					415	
Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu	Tyr	Leu	Asp	Val	Leu	Gly	Arg
			420					425					430		
Pro	Met	Val	Leu	Ala	Gly	Asp	Lys	Ala	Lys	Gln	Val	Gln	Trp	Thr	Asn
		435					440					445			
Val	Tyr	Leu	Asp	Ala	Leu	Glu	Leu	Gly	Leu	Val	Ile	Thr	Gly	Thr	Leu
	450					455					460				
Pro	Val	Phe	Asn	Ile	Thr	Gly	Gln	Phe	Glu	Asn	Lys	Thr	Asn	Leu	Lys
465					470					475					480
Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Val	Asp	Val	Ser	Leu	Glu	Asp
				485					490					495	
Ile	Lys	Arg	Leu	Thr	Pro	Arg	Phe	Thr	Leu	Cys	Pro	Asn	Gly	Tyr	Tyr
			500					505					510		
Phe	Ala	Ile	Asp	Pro	Asn	Gly	Tyr	Val	Leu	Leu	His	Pro	Asn	Leu	Gln
		515					520					525			
Pro	Lys	Asn	Pro	Lys	Ser	Gln	Glu	Pro	Val	Thr	Leu	Asp	Phe	Leu	Asp
	530					535					540				
Ala	Glu	Leu	Glu	Asn	Asp	Ile	Lys	Val	Glu	Ile	Arg	Asn	Lys	Met	Ile
545					550					555					560
Asp	Gly	Glu	Ser	Gly	Glu	Lys	Thr	Phe	Arg	Thr	Leu	Val	Lys	Ser	Gln
				565					570					575	
Asp	Glu	Arg	Tyr	Ile	Asp	Lys	Gly	Asn	Arg	Thr	Tyr	Thr	Trp	Thr	Pro
			580					585					590		
Val	Asn	Gly	Thr	Asp	Tyr	Ser	Leu	Ala	Leu	Val	Leu	Pro	Thr	Tyr	Ser
		595					600					605			
Phe	Tyr	Tyr	Ile	Lys	Ala	Lys	Leu	Glu	Glu	Thr	Ile	Thr	Gln	Ala	Arg

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610					615					620					
Ser 625	Lys	Lys	Gly	Lys	Met 630	Lys	Asp	Ser	Glu	Thr 635	Leu	Lys	Pro	Asp	Asn 640
Phe	Glu	Glu	Ser	Gly 645	Tyr	Thr	Phe	Ile	Ala 650	Pro	Arg	Asp	Tyr	Cys 655	Asn
Asp	Leu	Lys	Ile 660	Ser	Asp	Asn	Asn	Thr 665	Glu	Phe	Leu	Leu	Asn 670	Phe	Asn
Glu	Phe	Ile 675	Asp	Arg	Lys	Thr	Pro 680	Asn	Asn	Pro	Ser	Cys 685	Asn	Ala	Asp
Leu	Ile 690	Asn	Arg	Val	Leu	Leu 695	Asp	Ala	Gly	Phe	Thr 700	Asn	Glu	Leu	Val
Gln 705	Asn	Tyr	Trp	Ser	Lys 710	Gln	Lys	Asn	Ile	Lys 715	Gly	Val	Lys	Ala	Arg 720
Phe	Val	Val	Thr	Asp 725	Gly	Gly	Ile	Thr	Arg 730	Val	Tyr	Pro	Lys	Glu 735	Ala
Gly	Glu	Asn	Trp 740	Gln	Glu	Asn	Pro	Glu 745	Thr	Tyr	Glu	Asp	Ser 750	Phe	Tyr
Lys	Arg	Ser 755	Leu	Asp	Asn	Asp	Asn 760	Tyr	Val	Phe	Thr	Ala 765	Pro	Tyr	Phe
Asn 770	Lys	Ser	Gly	Pro	Gly	Ala 775	Tyr	Glu	Ser	Gly	Ile 780	Met	Val	Ser	Lys
Ala 785	Val	Glu	Ile	Tyr	Ile 790	Gln	Gly	Lys	Leu	Leu 795	Lys	Pro	Ala	Val	Val 800
Gly	Ile	Lys	Ile	Asp 805	Val	Asn	Ser	Trp 810	Ile	Glu	Asn	Phe	Thr	Lys 815	Thr
Ser	Ile	Arg	Asp 820	Pro	Cys	Ala	Gly	Pro 825	Val	Cys	Asp	Cys	Lys 830	Arg	Asn
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